

monitoring a characteristic of the communication signal;

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sending at least one engage signal to a system component to implement a tracking mode in response to the monitored characteristic; and

altering the communication signal by increasing the amplitude of the tracking tone in response to the at least one engage signal.

41. (New) The method of claim 40, further comprising altering a configuration of a receiver component in response to the at least one engage signal.

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42. (New) The method of claim 41 wherein altering the configuration of the receiver component comprises decreasing a tracking signal bandwidth.

43. (New) The method of claim 40 wherein monitoring a characteristic of the communication signal comprises identifying a reduction in signal strength, at the receiver, below a pre-defined threshold.

44. (New) A free-space optical communication system, comprising:

a first free-space optical terminal coupled to communication electronics to generate a communication signal, the first free-space optical terminal including a transmitter configured to transmit the communication signal as an optical signal;

a second free-space optical terminal, including a receiver to receive the optical signal, the receiver being coupled to tracking electronics to process a tracking signal; and

a sensor to sense changes in the optical signal, the sensor coupled to the communication electronics; and wherein

in response to changes in the optical signal, the sensor is configured to send a first engage signal to the communication electronics, and the communication electronics is configured to alter the communication signal in response to the first engage signal.

45. (New) The system of claim 44 wherein the communication signal comprises a data signal with a tracking tone superimposed thereon, the tracking tone having an amplitude, and wherein the communication electronics is configured to alter the communication signal by increasing the amplitude of the tracking tone.

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46. (New) The system of claim 44 wherein the sensor comprises a detector to receive at least a portion of the optical signal, the detector coupled to electronics configured to receive a detected signal from the detector and to compare the detected signal with a pre-defined threshold, and wherein sensing changes in the optical signal comprises identifying a reduction in the detected signal below the pre-defined threshold.

47. (New) A free-space optical terminal, comprising:

a signal generator to generate a high-speed signal;

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a tone generator to generate a tracking tone having an amplitude, the tone generator coupled to a controller;

a first modulator circuit, coupled to the signal generator and the tone generator, to combine the high-speed signal with the tracking tone to produce a product signal;

a second modulator circuit, coupled to the first modulator circuit, to combine the product signal with the high-speed signal to produce a communication signal; and

a transmitter to transmit the communication signal as an optical signal to a second free-space optical terminal capable of receiving the optical signal; and wherein

the controller is coupled to a sensor configured to sense changes in the optical signal and to generate and send an engage signal to the controller in response to an adverse change in the optical signal, wherein the controller is configured to increase the amplitude of the tracking tone in response to the engage signal.

48. (New) The free-space optical terminal of claim 47 wherein the controller is further configured to disable a high-frequency data modulation portion of the communication signal in response to the engage signal.

49. (New) The free-space optical terminal of claim 48 wherein the sensor is further configured to generate and send a disengage signal to the controller in response to an abatement of the adverse change, and the controller is further configured to resume the high-frequency data modulation portion of the communication signal in response to the disengage signal.

AI 50. (New) The free-space optical terminal of claim 47 wherein the sensor is further configured to generate and send a disengage signal to the controller in response to an abatement of the adverse change, and the controller is further configured to decrease the amplitude of the tracking tone in response to the disengage signal.

CONT 51. (New) The free-space optical terminal of claim 47 wherein the sensor comprises a detector to receive at least a portion of the optical signal, the detector being coupled to electronics configured to receive a detected signal from the detector and to compare the detected signal with a pre-defined threshold, and wherein sensing the adverse change comprises identifying a reduction in the detected signal below the pre-defined threshold.
